

## Claims

[c1] WHAT IS CLAIMED:

1. A method for operating an engine having a first and second group of cylinders, comprising:  
operating in a first mode wherein the first cylinder group operates with air and substantially no injected fuel and the second cylinder group operates by combusting air and injected fuel at a lean air-fuel ratio;  
providing an indication of the device temperature;  
in response to said indication, disabling said first mode of operation and operating the engine in a second mode of operation.

[c2] 2. The method recited in Claim 1 wherein said second mode of operation includes retarding ignition timing of cylinders in the second group.

[c3] 3. The method recited in Claim 1 wherein said second mode of operation includes injecting and combusting fuel in said first group.

[c4] 4. The method recited in Claim 1 wherein during said first mode, said second cylinder group combusts a lean air-fuel mixture.

[c5] 5. The method recited in Claim 1 wherein during said first mode, said second cylinder group combusts a stoichiometric air-fuel mixture.

[c6] 6. The method recited in Claim 1 wherein said second mode of operation includes injecting and combusting fuel in said first group at a near stoichiometric air-fuel ratio.

[c7] 7. The method recited in Claim 1 wherein said second mode of operation includes injecting fuel in said first group.

[c8] 8. The method recited in Claim 1 wherein said second mode of operation includes operating said second group of cylinders rich of stoichiometry, and wherein gasses from said first and second cylinder group mix.

[c9] 9. A method for operating an engine having a first and second group of cylinders, comprising:

in response to a desired engine output torque determined based on operating conditions, operating in a first mode wherein the first cylinder group operates with air and substantially no injected fuel and the second cylinder group operates by combusting air and injected fuel;

providing an indication of whether the device temperature is within a preselected temperature range;

in response to said indication, disabling said first mode of operation and operating the engine in a second mode of operation.

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